

# Post-Signing Adjustment Of SEP/FRAND Licenses

By Peter Georg Picht

## Abstract:

*The question of whether, when and how SEP/FRAND licenses ought to be “adjusted” in the case of a post-signing alteration in the set of licensed patents is of increasing practical relevance. Adjustment may be necessary to keep a license FRAND in the event of far reaching portfolio alterations and several legal instruments could potentially provide the basis for performing such adjustments, amongst them “adjustment clauses” which are integrated ex ante into the license contract or general principles of patent or competition law. On the other hand, the risk to generate continuous conflict between the parties cautions against making adjustment available too easily. This article maps the present legal framework regarding license adjustment on the EU, as well as on certain parts of the Member State level. It highlights a selection of fundamental aspects that ought to be taken into consideration for the development of appropriate solutions. Against this background, potential tools for and elements of such solutions are evaluated.*

## I. Introduction\*

“Standard-essential” patents (SEPs) protect inventions which form part of a technical standard and which need to be used in order to implement the standard, for instance by producing standard based devices. Such patents are oftentimes subject to the “FRAND” licensing approach under which the patentee of a potential SEP declares—typically at the request of a standard-setting organisation (SSO)—that it is willing to license its patents at “fair, reasonable and non-discriminatory” conditions to implementers of the standard in case these patents are or become standard-essential.<sup>1</sup> According at least to the majority of courts and scholars,<sup>2</sup> the patentee’s FRAND

\*Based on a draft of the paper, the author advised Ericsson GmbH on the matter of FRAND license adjustment. This paper represents the views of the author and does not necessarily represent the views of any company or institution the author has provided legal advice to.

1. For an overview of SSO licensing policies, see Bekkers, Updegrove, IPR Policies and Practices of a Representative Group of Standards-Setting Organizations Worldwide, 2013, [https://www.nap.edu/resource/18510/Bekkers-Updegrove%20Paper\\_092013.pdf](https://www.nap.edu/resource/18510/Bekkers-Updegrove%20Paper_092013.pdf).

2. LG Mannheim, 18 February 2011, 7 O 100/10; LG Düsseldorf, 24 April 2012, 4b O 273/10; LG Düsseldorf, Mitt. 2012, 238—MPEG-2-Standard XXIII; LG Mannheim, 27. February 2009, 7 O 94/08—UMTS-fähiges Mobiltelefon; LG Mannheim, 2 May 2012, 2 O 240/11; Kühnen, Handbuch der Patentverletzung, 9. Aufl. 2017, Kap. E Rdnr. 286; Haedicke, Lehren aus der Huawei v. Unwired Planet-Entscheidung für das deutsche Patentrecht, GRUR Int. 2017, 661, 669.

declaration does, however, not by itself establish a license contract<sup>3</sup> between the patentee and a particular implementer. In any case, the FRAND declaration is neither meant nor sufficient to spell out the detailed conditions of such a license. Patentee and implementer need therefore to subsequently agree on the terms of a FRAND license and the road towards this agreement can be a rocky one. For the European Union, the CJEU has, in its seminal decision *Huawei v. ZTE* (hereinafter: *Huawei*)<sup>4</sup>, laid out a number of principles and “rules of conduct” on how patentee and implementer should behave in FRAND licensing negotiations.<sup>5</sup> The Court was, however, rather tight-lipped regarding the necessary content of a FRAND license and did not explain how the conditions of the license need to be shaped in order to “be FRAND.” Since *Huawei*, EU Member State courts are in the process of working out the details of the CJEU’s framework of conduct by deciding issues which the CJEU left unsolved.<sup>6</sup>

One of these issues—as yet not much discussed in scholarly literature but of increasing prominence in practice—consists of the question whether, when and

■ Prof. Dr. Peter Georg Picht, LL.M.,  
Chair for Economic and Commercial Law,  
Faculty of Law,  
University of Zurich,  
Zurich, Switzerland  
E-mail: [lst.picht@rwi.uzh.ch](mailto:lst.picht@rwi.uzh.ch)

3. The UK decision *Unwired Planet v Huawei*, EWHC, HP-2014-000005, 5 April 2017, paragraph 115 et seq., affirms a contractual nature of the FRAND commitment but denies that it has the effect of establishing a (detailed) license contract between the parties. Instead, the license is held to require another, subsequent contract.

4. *Huawei Technologies Co. Ltd v ZTE Corp. und ZTE Deutschland GmbH* (C-170/13) ECLI:EU:C:2015:477.

5. *Huawei* (Fn. 3), paragraph 55 et seq. See further e.g. Peter Picht, “The ECJ rules on standard-essential patents: thoughts and issues post-Huawei,” European Competition Law Review 37, no. 9 (2016): 365-75; Federich Romby, “The ECJ’s Huawei judgment on standard-essential patents: a step forward in the ongoing antitrust debate,” *International Trade Law & Regulation* 22, no. 2 (2016): 42-46.

6. Picht, “‘Frاند wars 2.0’—Rechtsprechung im Anschluss an die Huawei/ZTE-Entscheidung des EuGH,” *Wirtschaft und Wettbewerb WUW* 2018 (to be published), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2916544](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2916544); Picht, “*Unwired Planet v Huawei*: A Seminal SEP/FRAND decision from the UK,” *Journal of Intellectual Property Law & Practice*, Volume 12, Issue 10, 1 October 2017, p. 867–880, <https://doi.org/10.1093/jiplp/jpx152>.

how SEP/FRAND licenses ought to be “adjusted” in case of an alteration in the set of licensed patents. An “alteration” may take the form of patent invalidation or, on the opposite, the confirmation of patent validity as a result of legal action; of patent expiration; of the acquisition of new patents covered by the license; or even of a change in the market value of particular patents. “Adjustment” can equally mean a variety of measures, such as an increase or decrease in royalties or the modification of other licensing terms. Several legal instruments could potentially provide the basis for performing such adjustments, amongst them “adjustment clauses” which are integrated ex ante into the license contract; general contractual principles on the ex-post modification of agreements; general principles of patent or competition law; or even specific, more or less binding state law provisions embedded into patent, contract or competition law.

The particular relevance of license adjustments to the SEP/FRAND area results from at least two factors: As SEP portfolios can be large and their licensing a crucial prerequisite for operating freely in lucrative, standards based markets, royalty payments to be made under SEP/FRAND licenses can add up to high amounts. Hence, there is much at stake for patentee and implementer alike and both sides may perceive license adjustment—depending on the direction it takes—as a tool for improving ex-post what they negotiated ex ante. Furthermore, with growing portfolio size, fluctuations in a SEP portfolio that raise the question of adjustment become a more and more frequent, one might even say an inherent, occurrence. This is all the more so because standardization and SEP/FRAND licensing loom particularly large in the ICT<sup>7</sup> sector, a sector for which short product, technology and standard life-cycles, intense patenting,<sup>8</sup> substantial invalidation activity (cf. below III.2.) and the transfer (not only the licensing) of patent portfolios<sup>9</sup> are characteristic.

As with other aspects of SEP/FRAND licensing, the narratives regarding license adjustment differ<sup>10</sup> as

profoundly as might be expected in a field that displays fierce antagonism between the involved market players. Are implementers the ones to be pitied—and rescued by way of license adjustment—because they are continuously forced into licensing, at excessive prices, “SEP” portfolios which contain mostly non-essential and/or invalid patents? Is it, on the contrary, urgent to save patentees from attempts to adjust SEP/FRAND licenses because adjustment would constitute yet another way to systematically deprive them of a fair remuneration for their R&D activity, as well as their contributions to standard-setting? Is the ex-post adjustment of licenses a necessary or an impracticable component in the attempt to create a SEP/FRAND licensing environment that is fair, facilitates business and sets the appropriate incentives to innovate?

The present article aims at taking a closer look at these intricate questions, bridging the gap between practical relevance and academic analysis regarding SEP/FRAND license adjustments. It sets out by mapping the present legal framework regarding license adjustment on the EU as well as on certain parts of the Member State level (II.). The analysis then turns to a (non-conclusive) selection of fundamental aspects that ought to be taken into consideration for the development of appropriate solutions to the adjustment issue (III.). Against this background, potential tools for and elements of such solutions are evaluated (IV.).

## II. Present Legal Framework

### 1. Statutory Law

#### a) EU Level

Although voluminous, the EU body of statutory law dealing with IP licensing does not contain any specific rules on adjustment. In particular, the Enforcement Directive,<sup>11</sup> the Horizontal Guidelines,<sup>12</sup> and the Technology Transfer Block Exemption Regulation (TT-BER)<sup>13</sup> with its corresponding Guidelines<sup>14</sup> are silent on this point. Since the TT-BER is arguably the regulation most relevant for competition law compliant SEP licensing and since the Horizontal Guidelines contain an entire section on the appropriate

7. Information and communication technologies.

8. On characteristics of the ICT sector, see e.g. Comino, Maria Manenti, JRC Science and Policy Report: Intellectual Property and Innovation in Information and Communication Technology (ICT), <http://publications.jrc.ec.europa.eu/repository/bitstream/JRC97541/jrc97541.pdf>.

9. On partial portfolio transfers, see for instance Picht, “Frands wars 2.0”—Rechtsprechung im Anschluss an die Huawei/ZTE-Entscheidung des EuGH,” [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2916544](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2916544).

10. They are summarized very concisely in the recent Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee setting out the EU approach to Standard Essential Patents, 29.11.2017, COM(2017) 712 final (hereinafter also: Commission Communication SEP), 2.

11. Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights (Enforcement Directive) [2004] OJ L157/45.

12. Guidelines on the applicability of Article 101 of the Treaty to horizontal co-operation agreements (Horizontal Guidelines) [2011] OJ C11/01.

13. Commission Regulation 316/2014 on the application of Article 101(3) of the Treaty to categories of technology transfer agreements (Technology Transfer Block Exemption Regulation) [2014] OJ L93/17.

14. Guidelines on the application of Article 101 of the Treaty to technology transfer agreements (TT-BER Guidelines) [2014] OJ C89/3.

set up for SSOs and their standard-setting activity,<sup>15</sup> their silence can be taken to mean that EU law has—so far—not felt the need to establish a principle of or rules on license adjustment. This assessment is corroborated by the EU Commission’s Communication on standard-essential patents, published in November 2017.<sup>16</sup> Although the Commission sets out various principles for the FRAND licensing of SEPs, post-signing adjustment is not among them and no word is said on the issue.

Some specific EU provisions may be of indirect relevance; however, paragraph 187 of the TT-BER Guidelines, in particular, states that the parties to a license contract can normally agree to extend royalty obligations beyond the period of validity of the licensed intellectual property rights without falling foul of Article 101(1) of the EU Treaty.<sup>17</sup> This is because, once these rights expire, third parties can legally exploit the technology in question and compete with the parties to the agreement. Such actual and potential competition will, according to the EU Commission, normally be sufficient to ensure that the obligation in question does not have appreciable anti-competitive effects. With regard to the present context, paragraph 187 TT-BER Guidelines implicitly confirms that a license contract is not in violation of EU competition law just because it contains no adjustment clause, even though the absence of such a clause may result in royalty payments for invalidated or expired patents.

## b) Member State Level

This article cannot provide a comprehensive report on pertinent EU Member State law. At least in some important Member States, though, the legal framework is similar to the EU level in its lack of explicit legislation on adjustment. It differs, however, in the existence of a legal tradition that applies general contractual rules to license adjustment scenarios and thereby develops, over time, a more or less detailed set of guiding principles on the matter.

German patent law, for instance, contains no explicit provisions dealing with license adjustment but it does feature contract law rules permitting to adapt an agreement to subsequent, material changes in relevant circumstances even though the agreement itself contains no adjustment clause. The “frustration of contract” doctrine (*Wegfall der Geschäftsgrund-*

*lage*, § 313 German Civil Code) serves as the main contractual tool for an ex-post adjustment of licenses.<sup>18</sup> § 313 German Civil Code sets the “frustration” threshold rather high, requiring that it would be unbearable (“*unzumutbar*”) for the licensee to perform the contract as originally stipulated.<sup>19</sup> Patent licensing case-law outside the SEP/FRAND context finds a “frustration” mainly where the only licensed patent is not granted or invalidated.<sup>20</sup>

## 2. Selected Case Law

### a) Ottung and Genentech

The look at paragraph 187 TT-BER Guidelines has indicated that license contracts obliging the licensee to continue the payment of royalties even after the licensed patent is no longer in force deserve competition law attention but that such contracts can be compliant with EU competition law provisions, in particular with Article 101 TFEU. This finding is corroborated by EU case law.<sup>21</sup> In its *Ottung* decision<sup>22</sup> the CJEU addressed a situation in which the licensed patent expired after the conclusion of the license agreement. The Court held (paragraph 11) that

“[t]he possibility cannot be ruled out that the reason for the inclusion in a licensing agreement of a clause imposing an obligation to pay royalty may be unconnected with a patent. Such a clause

18. Uhlmann, Deichfuß § 15 PatG, N 194 in “Beck’sche Kurzkommentare, Band 4, Patentgesetz, Gebrauchsmustergesetz, Patentkostengesetz,” ed. Georg Benkard (München: C.H. Beck, 2015); Groß, *Patentlizenzverträge* (Frankfurt am Main: dfv Mediengruppe 2016), N 72; Henn, Patent- und Know-how-Lizenzvertrag: Handbuch für die Praxis (Heidelberg: Müller 2003), N 248; Oliver Axster, § 20, 21 GWB, N 155 in “Gesetz gegen Wettbewerbsbeschränkungen und Europäisches Kartellrecht: Gemeinschaftskommentar,” ed. Christian Hootz (Köln: Heymann 2006); Pfaff/Osterrieth, Kap. 22 Rn. 127.

19. Uhlmann, Deichfuß § 15 PatG, N 194 in “Beck’sche Kurzkommentare, Band 4, Patentgesetz, Gebrauchsmustergesetz, Patentkostengesetz,” ed. Georg Benkard (München: C.H. Beck, 2015); Michael Groß, *Patentlizenzverträge* (Frankfurt am Main: dfv Mediengruppe 2016), N 72; Günter Henn, Patent- und Know-how-Lizenzvertrag: Handbuch für die Praxis (Heidelberg: Müller 2003), N 248; Oliver Axster, § 20, 21 GWB, N 155 in “Gesetz gegen Wettbewerbsbeschränkungen und Europäisches Kartellrecht: Gemeinschaftskommentar,” ed. Christian Hootz (Köln: Heymann 2006).

20. BGH, GRUR 1957, 595, 596—Verwandlungstisch; 1961, 466, 468—Gewinderollkopf.

21. U.S. courts, on the contrary, are very critical towards license contracts requiring post-expiration/invalidation royalty payments; cf. *Brulotte v. Thys Co.*, 379 U.S. 29 (1964) at 33: “[...] a patentee’s use of royalty agreement that protects beyond the expiration date of the patent is unlawful *per se*.”; *Kimble v. Marvel Entm’t, LLC*, 135 S. Ct. 2401.

22. *Kai Ottung v Klee & Weilbach A/S and Thomas Schmidt A/S* (C-320/87) ECLI:EU:C:1989:195.

15. Horizontal Guidelines, paragraphs 257-335.

16. Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee setting out the EU approach to Standard Essential Patents, 29.11.2017, COM(2017) 712 final.

17. Cf. Pfaff, Osterrieth, Kap. 22 Rn. 127 on the policy change this involves vis-à-vis the previous version of the Guidelines.

may instead reflect a commercial assessment of the value to be attributed to the possibilities of exploitation granted by the licensing agreement. [...] Where the obligation to pay royalty was entered into for an indeterminate period and thus purports to bind the licensee even after the expiry of the patent concerned, the question arises whether, having regard to the economic and legal context of the licensing agreement, the obligation to continue to pay royalty might constitute a restriction of competition of the kind referred to in Article [101](1).” [...] It may] infringe Article 101(1) TFEU where the licence agreement either does not grant the licensee the right to terminate the agreement by giving reasonable notice or seeks to restrict the licensee’s freedom of action after termination.”

In *Genentech*,<sup>23</sup> the CJEU had to decide not on patent expiration but on the revocation of a licensed patent. In line with *Ottung* the Court held (paragraph 40) that “Article 101(1) TFEU does not prohibit the imposition of a contractual requirement providing for payment of a royalty for the exclusive use of a technology that is no longer covered by a patent, on condition that the licensee is free to terminate the contract.”

## b) The *Huawei* Case

The *Huawei* ruling remains silent on the adjustment of SEP/FRAND licenses granted in a *de jure* standardization<sup>24</sup> context. Even where it discusses—and affirms—the right of a licensee to challenge infringement, validity or standard-essentiality of licensed patents after the conclusion of the license contract,<sup>25</sup> it does not suggest adjustment of the license contract following a successful challenge. The CJEU’s caution aligns well with its general approach of avoiding statements on the content of a FRAND license, focussing instead on the negotiation *process* that leads up to the agreement on a license. Helpful as some guidance regarding the substantive element—as opposed to the procedural element<sup>26</sup>—of FRAND may have been, there is also wisdom in the CJEU’s reticence. Given the particularities of each case and the

environment of rapid economic and technological change characteristic for ICT standard-setting, it is difficult for a high-level court as the CJEU to define detailed rules which prove appropriate for an entire gamut of potential constellations. At least until lower courts have accumulated more experience in defining FRAND for particular cases it seems indeed sound to rely on “recognised commercial practices in the field”<sup>27</sup>—meaning also: on the working of the market,—to trust in the ability of parties, bound by the duty to negotiate cooperatively and in good faith, to work things out themselves, and to impose court ordered FRAND conditions only where the reliance on party independence and market process fails. This “non-interventionist” approach chosen by the CJEU in general advocates caution regarding the particular aspect of license adjustment as well.

## c) Post-*Huawei* Case Law

In the vast majority of post-*Huawei* decisions issued by Member State courts license adjustment is not mentioned at all. This is in itself an important finding because it suggests that adjustment clauses or other contractual adjustment mechanisms do not (yet) form a recognized commercial practice in the field of SEP/FRAND licensing.

Two exceptions stand out, however: The Düsseldorf Higher Regional Court (*Oberlandesgericht*) held—however only in a guidance order (*Hinweisbeschluss*)—that

“furthermore a FRAND offer arguably requires that an adjustment clause be integrated into the license contract which allows for a royalty modification (in both directions) in case of noticeable alterations in the licensed portfolio. As far as claimant points to the fact that the standard license contract is limited to a duration of three years, it has, so far, not been shown that this removes the need for an adjustment clause: It has not been documented that such a limited duration compensates for noticeable portfolio alterations in the same way as an adjustment clause.”<sup>28</sup> [...]”

23. *Genentech Inc. v Hoechst GmbH and Sanofi-Aventis Deutschland GmbH* (C-567/14) ECLI:EU:C:2016:526.

24. Regarding a *de facto*-standard, the German Federal Supreme Court, 6 May 2009, KZR 39/06, paragraph 32, held that the patentee does not have to accept a clause reserving the right to challenge. This may be taken to imply that, in the Court’s view, license arrangements can, in a *de facto*-setting, be protected more strongly from subsequent alterations (challenges) or modifications (adjustment).

25. *Huawei Technologies Co. Ltd v ZTE Corp. und ZTE Deutschland GmbH* (C-170/13) ECLI:EU:C:2015:477, paragraph 69.

26. The fact that FRAND encompasses not only the conditions of a license but also the conduct in the negotiations regarding these conditions has been pointed out in particular by *Unwired Planet v Huawei*, EWHC, HP-2014-000005, 5 April 2017; cf. Picht, “*Unwired Planet v Huawei*: A Seminal SEP/FRAND decision from the UK,” *Journal of Intellectual Property Law & Practice*, Volume 12, Issue 10, 1 October 2017, p. 867–880, <https://doi.org/10.1093/jiplp/jpx152>.

27. *Huawei Technologies Co. Ltd v ZTE Corp. und ZTE Deutschland GmbH* (C-170/13) ECLI:EU:C:2015:477, paragraph 65.

28. Düsseldorf Higher Regional Court, 17 November 2016, I-15 U 66/15, paragraph 32.



If claimant does not integrate an adjustment clause into its offer it has to justify why this is not necessary. The non-integration of a clause on adjustment in the event of patent (family) expiration might be FRAND compliant only if it conforms to recognised commercial practice in the field, if the offered license contract is of short duration and if the overall royalty for the entire contract duration is FRAND because it appropriately prices in the expiration of patents during the period the license contract is in force.<sup>29</sup>

*Unwired Planet International Ltd v Huawei Technologies Co Ltd* (hereinafter: *Unwired Planet*),<sup>30</sup> as yet the most important UK decision on SEP/FRAND licensing, also discusses adjustment aspect, although not as detailed and comprehensively as the Düsseldorf decision. Regarding the determination of country-by-country royalty rates based on the number of declared SEPs in each country, the High Court held that

“[a]ny declared SEP [...] which is determined by a relevant court to be invalid or not essential would cease to count as a declared SEP. This is a simple way of ensuring that the licensee can, if they wish, challenge validity (etc.) while the agreement is in force. If further declared SEPs are added then again appropriate adjustments can be made.”<sup>31</sup>

### 3. Some Take Aways

As the law stands, it contains some elements of an answer to our core question of whether, when and how license adjustment is required. Other important aspects of the question remain, however, open.

Neither have, in particular, contractual adjustment clauses been declared strictly mandatory nor their omission clearly anticompetitive. On the contrary, paragraph 187 TT-BER Guidelines, *Ottung* and *Genentech* permit even the non-adjusted continuation of a licensing relationship post expiration/invalidation. This finding is quite important since patent expiration and patent invalidation are key instances for SEP portfolio alterations. However, *Ottung*, *Genentech* and the Guidelines require that the licensee be given a right to terminate the license contract and, indeed, termination and renegotiation can serve as an alternative to the adjustment of a contract that remains in force. Although the findings in this line of cases are certainly

of value for the assessment of SEP/FRAND licenses, their direct and unmodified application to such licenses is, however, doubtful. Neither *Ottung* nor *Genentech* deal with large portfolios and the standardization context. A—simplified—formula declaring “if one patent lapses, go on paying as before or terminate the contract” is unlikely to provide the best solution for the SEP/FRAND world. Such a formula would render license contracts very unstable in an environment of fluctuating portfolios and it could force implementers out of the respective standards based markets once they decide to terminate the license contract as they remain, even after the lapse of one licensed patent, likely to violate another of the many SEPs previously licensed under the now terminated contract.

The *Huawei* decision’s contribution to the issue is rather a non-interventionist general tendency that relies, for defining details of the FRAND concept, on “recognized commercial practice” in the market rather than on theoretical concepts. The Düsseldorf Higher Regional Court, however, has made a detailed statement on which part of the coming discussion about license adjustment is likely to focus. Essentially, the Court says that (1) contractual adjustment mechanisms can be a necessary tool to handle post-signing portfolio fluctuations, even if the duration of the license contract does not exceed three years; that (2) non-adjustment is, however, acceptable if it corresponds to recognized commercial practice, at least where the portfolio alteration is caused by patent expirations which are already priced in *ex ante*; that (3) adjustment ought to be triggered only by “noticeable” portfolio alterations; and that (4) adjustment must be a bidirectional business, allowing also for conditions more favourable to the patentee in case the portfolio’s value increases. The Court’s position leaves open, however, open a number of questions. It is, for instance, not clear whether a potential adjustment requirement follows from contractual or from competition law principles and—related to this aspect—whether parties are free to consensually exclude for their license agreement any adjustment whatsoever. The *Unwired Planet* decision confirms the bidirectional nature of an appropriate adjustment regime. Furthermore, the decision points out that adjustability may generate an incentive to challenge licensed patents. Obviously, these court decisions raise a number of follow-up on questions—what really is the recognized commercial practice regarding adjustment? Is it appropriate and in line with the European case law to distinguish between patent expiration and the invalidation of licensed patents although a certain invalidation rate may also be priced into the licensing conditions? How can the noticeability threshold be specified more precisely? Regarding German law, another open question is the relation of the

29. Düsseldorf Higher Regional Court, 17 November 2016, I-15 U 66/15, paragraph 43.

30. *Unwired Planet v Huawei*, EWHC, HP-2014-000005, 5 April 2017.

31. *Unwired Planet v Huawei*, EWHC, HP-2014-000005, 5 April 2017, paragraph 588.

“unbearable” threshold stemming from § 313 German Civil Code and the “noticeable” threshold envisaged by the Düsseldorf Higher Regional Court. Is noticeability a contractual threshold integrated either explicitly or implicitly into the SEP/FRAND license contract while unbearability constitutes a statutory law threshold that is always applicable but reached only where portfolio alterations go beyond mere noticeability?

### III. Fundamental Considerations

The task of answering these questions and working out an appropriate adjustment regime ought to be fulfilled with a view to general principles that help to order SEP/FRAND licensing.

#### 1. A Balanced SEP/FRAND Licensing System

Prominently among them ranks the awareness that the SEP/FRAND system has to secure the legitimate interests of patentees and implementers alike.<sup>32</sup> As it forms part of the—all in all beneficial—activity of IP licensing and as it is an important pillar in the architecture of standards-based markets, a legal framework for SEP/FRAND licensing must aim at keeping this mechanism workable and attractive to stakeholders. Implementers need to be protected in their freedom to operate by acquiring and maintaining—in spite of portfolio alterations—the right to use the necessary SEPs at FRAND conditions. At the same time, patentees need protection from hold-out practices, trying to use while evading compensation for the innovations made by others. When it comes to controversial elements of this framework, all sides are likely to point to dynamic<sup>33</sup> efficiency and their respective incentives to invest and innovate. It is very hard to correctly predict and weigh such effects. But there is a good chance that a balanced approach yields the best results. And last but not least, a balanced framework is more than just a pious hope since the CJEU considers it a legal requirement under the TFEU and the Charter of Fundamental Rights of the European Union.<sup>34</sup>

#### 2. Adjustment—Requirement to Keep a License FRAND?

A SEP/FRAND license needs to be FRAND, not only at the outset when the license is negotiated and agreed upon but also throughout the timespan it is in force. This follows, arguably, not only from the appropriate interpretation of a typical FRAND declaration but also

from EU competition law. Assuming that a particular license was FRAND when signed by the parties, any post-signing alteration in the set of licensed patents suggests, at first sight, that the licensing conditions—royalties in particular—need adjustment since they are no longer a FRAND compliant reflection of the economic and legal realities, *i.e.* of the number and value of the licensed patents.<sup>35</sup> At a closer look, however, things are more complicated.

The typical<sup>36</sup> SEP/FRAND agreement is neither drafted nor meant to license a fixed set of, say, a thousand patents that the patentee holds at a particular point in time. In the interest of both parties it aims, instead, at covering *all present and future* SEPs the patentee holds or acquires with regard to a particular standard. Technical standards evolve over time, dropping elements that have proven unsuccessful or that are no longer needed and integrating new components as technology progresses. Patents on standard relevant technology can, therefore, adopt or lose essentiality to the standard. Furthermore, it is likely, sometimes almost certain, that the licensor will register or otherwise acquire (e.g. by way of transfer) additional SEPs. A fixed set approach could therefore hardly protect a licensee from infringing on some of the licensors’ patents and provide the stable, secure environment for doing standard-based business.

The openness of the licensed portfolio and the inherence of alterations to this portfolio are bound to have an impact on licensing conditions. To the extent these conditions are set with a view to future fluctuations in the number of relevant patents they necessarily contain an element of estimation, accounting for the uncertainty regarding details of such fluctuations. A second element of uncertainty may stem from fluctuations not in the number but in the value of the licensed patents. If, for instance, a patent covers a successful new product or if it is upheld in court, its market value will tend to go up. If, on the other hand, a patent-based product is no longer successful in the market or if one member of a multi-national patent family is invalidated by the courts of the respective national jurisdiction, patent value will tend to go down. Such value fluctuations may not be as clear-cut as fluctuations in the number of licensed patents. However, as FRAND includes the concept of fairly reflecting the value of the licensed patents,<sup>37</sup> they ought, in principle, to impact FRAND licensing conditions as well.

32. Cf. *Huawei Technologies Co. Ltd v ZTE Corp. und ZTE Deutschland GmbH* (C-170/13) ECLI:EU:C:2015:477, paragraph 42; Commission Communication SEP, 1 seq.

33. On the concepts of static and dynamic competition in general, see Schmidt, The suitability of the more economic approach for competition policy: *dynamic vs. static efficiency*, E.C.L.R. 2007, 28(7), 408-411.

34. Cf. *Huawei Technologies Co. Ltd v ZTE Corp. und ZTE Deutschland GmbH* (C-170/13) ECLI:EU:C:2015:477, paragraph 42.

35. This seems to be the tendency in Hauck/Kamlah, Was ist “FRAND?” Inhaltliche Fragen zu kartellrechtlichen Zwangslizenzen nach Huawei/ZTE, GRUR Int. 2016, 420, 425.

36. Cf. Commission Communication SEP, 7, 10 seq., on the appropriateness of SEP portfolio licenses as opposed to a patent-by-patent licensing.

37. See, paragraph 284, 289 Horizontal Guidelines w.f.r.

Fluctuations of number or value in the licensed portfolio can, theoretically, be reflected by the post-signing adjustment of licensing conditions. Where portfolio size, license duration and fluctuation rate are limited this may perhaps even be put into practice. The longer a license is intended to run, though, the larger the size of the licensed portfolio and the more frequent (therefore) fluctuations become, the less practicable continuous adjustments of conditions appear. They would tend to transfer the license from a reliable basis for commercial activity into a never-ending construction site requesting ever new resources for assessing patents, negotiation over their value, etc. Parties are likely, therefore, to set stable licensing conditions, at least where SEP portfolios are large. The conditions may account to a certain extent for fluctuations in the commercial value of the portfolio, in particular where royalties depend on the number and price of patent-based products sold by the licensee. But otherwise, post-signing fluctuations are oftentimes not addressed. This circumstance can be explained best by assuming that fluctuations and the incertitude regarding their extent are priced into the initial licensing conditions.<sup>38</sup>

In a broader sense, licensing terms often have to include a probabilistic element, in correspondence with the probabilistic nature of the subject they are dealing with. Looking only at *ex post* certitude regarding validity or value of particular patents would neglect the profound *ex ante*-uncertainty about patent strength shared by both parties. Importantly, this goes for subsequent patent invalidations as well. Academic research on the percentage of “vulnerable” patents—*i.e.* patents prone to invalidation—in a typical SEP portfolio has yielded differing results.<sup>39</sup> Safe it seems to say, nonetheless, that a sizeable SEP portfolio is likely to contain a non-negligible amount of vulnerable patents while also containing a non-negligible amount of strong and certainly standard-essential patents. Whatever this may tell about the quality of patent approval procedures and a greater need for mechanisms that verify standard-essentiality of declared SEPs, it is a scenario under which parties can and do set licensing conditions that account for both the vulnerable patents and the patents that certainly have to be used in order to implement the respective standard at all.

38. Cf. also Düsseldorf Higher Regional Court, 17 November 2016, I-15 U 66/15, paragraph 43, acknowledging the pricing-in of expirations during the term of the license agreement.

39. See, for instance, Henkel, Zischka, Why most patents are invalid—Extent, reasons, and potential remedies of patent invalidity, [https://www.tim.wi.tum.de/fileadmin/w00bcy/www/Research/Publications/Henkel/Henkel\\_Zischka\\_Patent\\_Validity.pdf](https://www.tim.wi.tum.de/fileadmin/w00bcy/www/Research/Publications/Henkel/Henkel_Zischka_Patent_Validity.pdf); Kühnen, Claessen, Die Durchsetzung von Patenten in der EU—Standortbestimmung vor Einführung des europäischen Patentgerichts, GRUR 2013, 592, 594; Hess, Müller-Stoy, Wintermeier, MittdtPatA 2014, 439.

Given that patent licensing has been going on for decades and has, overall, proven to be a workable mechanism, it seems fair to assume that parties can jointly deal even with a high degree of uncertainty regarding the content and development of a SEP portfolio. Not always will the pricing in of uncertainties work well, for instance where alterations are both unforeseen and disruptive in their magnitude or where the level of information available to the negotiating parties is very unequal.<sup>40</sup> Absent such extraordinary circumstances, however, conditions that appropriately price in subsequent portfolio alterations, thereby providing stability and allowing for intense, standards-based market activity are in the interest of both parties as well as in the common interest—they are FRAND.

### 3. Chilling Challenges and the Viability of the SEP/FRAND System

There is truth to the argument that non-adjustment can have a chilling effect on challenges against licensed patents since it takes away, to a certain extent, the economic incentive of reducing royalties by way of a successful challenge.<sup>41</sup> However, this point may be carried too far by implying that more challenging is always better and that the potentially chilling impact of a relatively restrictive adjustment regime must reduce challenging activity below an optimal level. Legal peace and stable conditions for doing business are important advantages from a legal, economic and social point of view. They would suffer if the hope for easily available adjustment added yet another layer to the existing in-court and out-of-court struggles over FRAND license agreements. Trying to justify a scenario in which continuous adjustment negotiations and adjustment litigation divert ever more resources from the core business activities of the players involved one may point to the—as such—beneficial effect<sup>42</sup> that challenges may destroy weak patents which ought not to have been granted in the first place. This is, however, only part of the story. Since appropriate adjustment must go both ways, a substantial part of adjustment activity is likely to come from patentees pointing to SEPs which are new in the portfolio or have experienced an increase in value. In a substantial part of these cases, no weeding out of bad patents can be expected.

Subtle economic analysis may be able to precisely balance the advantages (*e.g.* destruction of weak pat-

40. Cf., for instance, Commission Communication SEP, 3, on the particular difficulties start-ups and SMEs may face.

41. Hauck/Kamlah, Was ist “FRAND?” Inhaltliche Fragen zu kartellrechtlichen Zwangslizenzen nach Huawei/ZTE, GRUR Int. 2016, 420, 424; arguably along the same lines *Unwired Planet v Huawei*, EWHC, HP-2014-000005, 5 April 2017, paragraph 588.

42. Cf. recital (15), Article 5 paragraph 1 b) Technology Transfer Block Exemption Regulation; paragraph 133 *et seq.* TT-BER Guide-lines.

ents, lower royalty costs to be passed on to consumers) and disadvantages (e.g. higher transaction and litigation costs, higher royalty costs for patents subsequently added to the portfolio, economic uncertainty for the parties leading to a potential loss in dynamic efficiency) of post-signing challenges and to come up with a truly optimal challenging level. Until this is achieved, though, the experiences with pre-signing disputes over the conclusion and the content of SEP/FRAND licenses advise against the careless creation of new opportunities for disagreement.

EU (case) law has already demonstrated its willingness to establish and enforce a workable legal framework that induces peaceful and effective licensing, even if some trade-offs have to be accepted in order to achieve this goal. The TT-BER Guidelines, for instance, are rather lenient towards no-challenge clauses if such clauses form part of a license agreement established by way of a settlement between the parties.<sup>43</sup> Hence, the EU Commission accepts contractual mechanisms stabilizing the contract the parties settled for even though these mechanisms limit the right to challenge. With its conduct requirements for a licensing negotiation process the CJEU's *Huawei* decision aims at replacing litigation enforced by party consented SEP/FRAND licensing. As long as the parties agree, during this process, on a set of licensing conditions, the CJEU requires no neutral instance to check whether the agreed license terms really are FRAND. In a sense, that is, the Court favours negotiated peace over FRANDliness as defined by theoretical formulae. When sketching the road towards a negotiated, stable business environment based on FRAND-compliant licensing conditions the CJEU did, most likely, not envisage contractual elements prone—as far reaching adjustment clauses are—to disrupt the achieved stability. In post *Huawei* case law, Member State Courts have, so far, been fairly critical towards a patent-per-patent approach<sup>44</sup> according to which a SEP/FRAND license would define an exclusive list of (court tested) SEPs and attribute a fixed royalty to each of these patents. Instead, broad portfolio li-

censes seem to become the widely favoured solution.<sup>45</sup> As already explained, it is inherent to a portfolio approach to make and maintain a summary assessment of patent value and royalties instead of engaging in, as it were, a post-signing patent-by-patent approach as patents continue to enter or drop out of the portfolio.

All these reflections suggest: Rules on the adjustment of SEP/FRAND licenses should aim at workable compromises,<sup>46</sup> even if they deviate somewhat from an optimal reflection of each licensed patent's value in the licensing conditions at any given moment. A reasonable threshold must be made operational, allowing for adjustment only in the event of disruptive portfolio alterations. Challenging patents in the portfolio would, in any case, remain possible even if adjustment were excluded altogether. And even if it will not lead to an adjustment, challenging can be attractive since the implementer is, after a successful challenge, free to use the previously patented technology even for uses not covered by the license. Furthermore, patents invalidated as the result of a challenge would be disregarded when parties recalculate royalties for a follow-on license.

## IV. Solutions?

### 1. Cornerstones for a Workable Adjustment Regime

As discussed below, there may be several legal mechanisms to implement a workable adjustment regime. Each approach should, however, take into consideration at least the following aspects:

- If an adjustment friendly regime is chosen with regard to open portfolio licenses, adjustment must, in order to qualify as FRAND, be a bidirectional mechanism, allowing also for modifications in favour of the patentee. In case of cross licensing the modifications in the portfolios of both parties may level out, thereby removing the need to actually adjust the licensing conditions.
- Of great importance is a threshold below which portfolio alterations trigger no adjustment at all. In our opinion at least, this threshold ought to be a restrictive one in order to foster the stability of license agreements. Existing case law seems to corroborate this view (cf. above). For short term license contracts the need to adjust is even lower since parties can react to portfolio alterations in (the case of) a renewal of the contract, exchanging ex post modification by ex-ante business judgment.
- If market developments such as 5G should intensify the trend towards large portfolio licenses it may well be that portfolio fluctuations increase but instances in which alterations require adjust-

43. Paragraph 242 *et seq.* TT-BER Guidelines. Cf. also paragraphs 174, 178 TT-BER Guidelines: positive effects may justify even restrictive licensing contracts under Article 101 paragraph 3 TFEU.

44. LG Düsseldorf, 31 March 2016, 4a O 73/14—*Saint Lawrence/Vodafone*, Rn. 263; LG Düsseldorf, 31 March 2016, 4a O 126/14—*Saint Lawrence/Vodafone*, Rn. 257.

45. LG Düsseldorf, 31 March 2016, 4a O 73/14—*Saint Lawrence/Vodafone*, Rn. 294; LG Düsseldorf, 31 March 2016, 4a O 126/14—*Saint Lawrence/Vodafone*, Rn. 288; LG Mannheim, 8 January 2016, 7 O 96/14—*Pioneer/Acer*, Rn. 119, 132 f.; LG Mannheim, 27 November 2015, 2 O 106/14—*Saint Lawrence/Deutsche Telekom*, Rn. 220; *Unwired Planet v Huawei*, EWHC, HP-2014-000005, 5 April 2017, paragraph 535 *et seq.*

46. Cf. also Commission Communication SEP, 6 *seq.*, stressing efficiency considerations and the role of transaction costs in SEP licensing.



ment decrease as the overall portfolio value and structure is less affected by individual fluctuations.

- Although further empirical research is needed on this point, it may well be that market sensitive adjustment thresholds adapted to the particularities of their respective market are preferable over a one size fits all approach.<sup>47</sup>
- Existing (Member State) law on and mechanisms for the ex post adjustment of licenses must not be disregarded but, on the contrary, must be relied upon as far as it can effectively do the job. It is much better to adapt, where necessary, existing patent (licensing) law to the particularities of the SEP/FRAND environment than to create a body of “law apart” for these matters, an exercise that would, in all likelihood, lead to severe tensions between general and SEP/FRAND specific patent (licensing) law. This is not to mean that (EU) competition law has no role to play. But it should step in only when and where patent law proves unable to work out procompetitive, FRANDly solutions.
- Party autonomy should, in principle, be respected even if parties mutually agree to explicitly exclude post-signing adjustment. Given that after *Huawei* both parties—in particular the patentee seeking an injunction—are obliged to offer and accept FRAND conditions lest they be defeated in court, such an agreement will, in most cases, not be the result of pressure exercised by one party but of a shared interest of both parties.
- Claiming adjustment should not become an easy way to evade one’s obligations under the license contract. A party that chooses to ask or even litigate for adjustment must therefore continue to honour these obligations, be it by paying royalties or by not interfering with the use of the licensed patents. In particular circumstances, for instance where the licensee is in danger not to receive back royalty payments once a retroactive downward adjustment of the royalty rate has taken place, or the

patentee may risk not receiving the additional payment for newly acquired SEPs, payments into an escrow account can be an option.

## 2. Potential Legal Tools

Among the legal tools with which the adjustment issue could be handled, detailed and binding regulatory or legislative intervention seems premature at present, given the early stage of case law and academic discussion.

Parties to a license contract are in the best position to shape—where necessary—a case sensitive, suitable adjustment regime<sup>48</sup> along the lines of the “cornerstones” formulated above.<sup>49</sup> This remains true even where competition law may suggest the integration of an adjustment mechanism into a license contract since general competition law principles must still be translated into case-by-case solutions. The level of detail of such contractual solutions may vary and parties may choose between different types of clauses. For instance, parties may opt for long contract durations in combination with a post-signing adjustment mechanism or they may prefer a medium term contract, allowing for adjustments in the process of (re) negotiating conditions for a subsequent license term. Furthermore, parties may select between the cooperative working out of a potential adjustment, a unilateral right to terminate the license, and a unilateral determination of adjusted conditions that is, however, subject to good faith and, if necessary, court controlled (§ 315 BGB).<sup>50</sup> Very detailed clauses may appear attractive at first but it can prove tricky to capture all possible developments. To give only a few examples: Can a first instance invalidation trigger adjustment or only a final decision? How to deal with a partial revocation or confirmation, potentially extending to only one/some member(s) of a patent family? How to effectively and reliably value patents that are subsequently added to the portfolio? Very unspecific clauses, on the other hand, may lead to frequent conflict over whether the broad terms of the clause are met or not. One middle ground option

47. Cf. Pfaff/Osterrieth, Kap. 22 Rn. 133, stating that in cross-border licensing royalty adjustments are usually linked not directly to the invalidation of a licensed right but to losses in market share; the impact of patent invalidation on market share loss will, however, not be the same in all markets. The great importance attributed to—necessarily market-specific—Comparables in the determination of SEP/FRAND licensing conditions also shows that such conditions ought to be set with regard to the particular market at issue. On the relevance of Comparables, see e.g. paragraph 284 Horizontal Guidelines; *Unwired Planet v Huawei*, EWHC, HP-2014-000005, 5 April 2017, paragraph 175 *et seq.*; LG Düsseldorf, 31 March 2016, 4a O 73/14—*Saint Lawrence/Vodafone*, Rn. 225 ff., 230 ff.; LG Düsseldorf, 31 March 2016, 4a O 126/14—*Saint Lawrence/Vodafone*, Rn. 219 ff., 224 ff.

48. Cf. again Düsseldorf Higher Regional Court, 17 November 2016, I-15 U 66/15, paragraph 32, assuming a contractual solution.

49. Cf. also Commission Communication SEP, 6, emphasizing that “the parties are best placed to arrive at a common understanding of what are fair licensing conditions and fair rates, through good faith negotiations.”

50. Several German courts have expressed a favourable view on using § 315 German Civil Code in the context of SEP/FRAND licensing, see LG Mannheim, 27 November 2015, 2 O 106/14—*Saint Lawrence/Deutsche Telekom*, Rn. 227; LG Düsseldorf, 31 March 2016, 4a O 73/14—*Saint Lawrence/Vodafone*, Rn. 282 ff.; LG Düsseldorf, 31 March 2016, 4a O 126/14—*Saint Lawrence/Vodafone*, Rn. 276 ff.; from the pre-*Huawei* case-law, see for instance OLG Karlsruhe, 27 February 2012, 6 U 136/11.

could lie in the definition of an alteration threshold the crossing of which triggers adjustment, together with a methodology that an independent third party should apply in adjusting the license conditions.

Where the terms of an individual contract fail to provide a (complete) answer, general rules on license contracts—such as the “frustration of contract” doctrine (*Wegfall der Geschäftsgrundlage*, § 313 German Civil Code)—can, in principle, be applied if keyed to the particularities of a SEP/FRAND environment. This helps to keep the SEP/FRAND licensing rules connected to general patent law and, thereby, to foster consistency of the patent system.

Alternative Dispute Resolution in the form of mediation and arbitration is still an exception but seems to be increasingly used for SEP/FRAND disputes,<sup>51</sup> offering an additional road towards solving adjustment issues. Parties may, in particular, profit from this opportunity by contractually establishing ADR mechanisms

as a way to resolve adjustment issues. The proposition of a workable ADR mechanism in cases of noticeable alterations in the licensed portfolio could even be regarded as an indicator for the FRANDliness of a license offer, although this should not go so far as to make ADR willingness a mandatory component of a FRAND license (offer).<sup>52</sup> If ADR fails, the courts in important patent venues, such as Great Britain, France, the Netherlands or Germany, have much experience in dealing with license contract issues. And they have increasing experience regarding the particularities of SEP/FRAND settings. There is reason to hope that courts and ADR institutions can—over time and, hopefully, requiring only a limited amount of litigation—establish sound rules on adjustment where they are needed. Where this gradual process fails, however, regulators or the legislature ought to be ready to step in. ■

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51. See, for instance, “Nokia receives decision in patent license arbitration with LG Electronics,” 18 September, 2017, [https://www.nokia.com/en\\_int/news/releases/2017/09/18/nokia-receives-decision-in-patent-license-arbitration-with-lg-electronics](https://www.nokia.com/en_int/news/releases/2017/09/18/nokia-receives-decision-in-patent-license-arbitration-with-lg-electronics).

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52. Commission Communication SEP, 11.